

# Project Proposal

**Proposal Title:** Scott M Matheson Wetlands Perpetual Water Enhancement Project Phase I

**Proposal Number:** 1413

**DWR Region:** Southeastern Region

**Lead Agency:** DWR

**County:**

**Project Manager:** Chris Wood

**PM Phone:** 4356133709

**Regional Priority:** Within Focus Area

**Project Type:** Terrestrial Habitat

**Proposed Start Date:** 07/01/2009

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**Project Location:** Grand County, north of Moab on the Scott M. Matheson Wetlands Preserve

**Project Description:** Restore the Wetlands Preserve by using UDWR's water right to increase water connectivity, increase water volume, and enhance wetland habitat

**Description of Problem/Need:** The Scott M. Matheson Wetlands Preserve is the only significant wetland ecosystem along the Colorado River in Utah. This system supports over 200 species of birds, amphibians, including the northern leopard frog, and aquatic mammals such as the beaver, muskrat and the river otter. The Nature Conservancy (TNC) and the Utah Division of Wildlife Resources (UDWR) jointly own the 900 acre wetland preserve. Through a contractual agreement the preserve is managed by TNC. This Preserve is located in Moab, Utah along the banks of the Colorado River. The Preserve is currently managed for wetland ecosystem and wildlife habitat preservation and low impact recreation.

Designated as a Wildlife Management Area, hunting activities are allowed in the northern portion of the site. The southern half of the Preserve is a wildlife resting area and includes nature trails and interpretive displays for public education and enjoyment.

The last several years, numerous habitat restoration projects have been implemented on the Preserve. These restoration projects have included removing non-native vegetation (tamarisk and Russian olive), treating resprouts and noxious weeds, planting riparian trees and shrubs, fire rehabilitation work, and aerial seeding. While these practices are important to the overall ecologic health of the wetland, the most crucial component to the wetland is water. TNC and UDWR have tried a variety of techniques to bring more water into the Preserve including drilling wells, collecting irrigation return flows, diverting storm runoff, and purchasing spring water rights. Some of these techniques have added water to the wetland while others have failed entirely. Despite these efforts, over the past ten years, the Preserve has seen a decline of standing water and wetland habitat on the Preserve. The South Pond, an area that was once a prime waterfowl observation area, has been dry for 8 years. As droughts become longer and more frequent, and the demands for water on the upper ends of the watershed increase, water issues on the Preserve will only magnify.

The loss of water is a cause of concern for many reasons. Loss of water has reduced marsh wetland habitat and reduced sportsmen recreational opportunities. The reduced amount of water has resulted in shallow conditions in the central pond area which has facilitated bulrush growth, and thus increased mosquito habitat and the threat of West Nile Virus. Loss of water also reduces the quality of wetland and lowland riparian habitat on the Preserve that supports game, non-game, and sensitive species.

In 1982, UDWR filed for the water rights on the treated sewer effluent water. The City of Moab's water treatment plant is adjacent to the Preserve and currently water is treated at the plant and piped across the Preserve and released into the Colorado River. For several years, UDWR and TNC have worked with Utah Division of Water Rights, Utah Department of Environmental Quality (UDEQ), City of Moab, and engineers to plan how that water can be used in a safe, environmentally clean, and efficient manner. With minimal construction, a structure can be built that would allow water to be diverted from the sewer treatment plant pipeline into the wetland. DWR must start the construction of the sewer effluent project or we risk losing the right. The last extension of time granted to DWR by the State Engineer said that "unless substantial progress is made in physical development to place the water to full beneficial use within the time granted, the State Engineer will deny the next the next request of extension of time" which is due in 2011. This water right is invaluable to the Preserve because it will be a consistent and dependable source of water for the future. In summer 2008, TNC hired an engineer to complete a low maintenance and low cost design that would allow DWR and TNC to prove up on our water right and provide water to the south and central portions of the Preserve. Included in this design is a ¼ acre dechlorination pond which will clean the water (dechlorinate) to standards acceptable by the Preserve managers and UDEQ before it enters the Preserve. UDWR and TNC will also have the flexibility to turn off water flow into the Preserve and use the existing pipe which would release the water into the Colorado River.

This is phase one of a multi-phase project. The majority of the costs for this project will be needed for phase I.

- Objectives:**
1. Restore natural hydrologic flow between the Central Pond and the South Pond on the Preserve by removing portions of then dike.
  2. Increase native wetland and riparian grass, forb, shrub, and tree species by increasing water availability in the Preserve.
  3. Reduce bulrush cover and lower the risk of West Nile Virus by increasing the water volume and depths into the Preserve.
  4. Show proof on UDWR's water right and secure the right for the future for the Preserve.

**Relevance to Strategic Plans:** According to the Wildlife Action Plan (WAP) the lowland riparian habitat type is the most critical habitat type in Utah. This area is within the UPCD-SER Wetland Conservation Focus Area.

**Potential Risks:** DWR has maintenance budgets to control and noxious weeds that might become more abundant due to surface disturbance. This project was designed and will be implemented by a former Ducks Unlimited engineer who has completed similar projects.

# Project Proposal

**Proposed Methods:** TNC and DWR will hire a private sector Engineer for 2 approximately months (\$15,390- TNC funds) to oversee project construction and work with contractors to ensure the design is implemented correctly. Contractors will be hired to bring in heavy equipment (\$4,025), to perform site preparation (e.g. vegetation clearing, elevation work, etc) (\$5,750) that will be needed before actual construction can begin.

Contractor(s) will build a Main Water Control Structure (WCS) (\$6,900), which will include a screw gate (\$1,380), and solar pump (\$11,500). In simple terms, this is a fixed crest overflow diversion structure with dimensions 48"x 44" x 24"(h) that will provide to the preserve the treated effluent from the local water treatment plant. This structure will allow for water to be diverted into a new proposed dechlorination pond and then into the preserve or if needed or desired to be discharged directly into the Colorado River as it is currently. The approximately ¼ acre size dechlorination pond will be built (\$5,750) completely around this WCS and will function to remove chlorine dissolved in the effluent from the water. Two full round Stoplog Structures (\$11,500) will be built to provide water outlet into the preserve – One to the South Pond and One to the Central pond. This two structure configuration will allow for independent control of the two respective wetland cells and provide for enhanced management capabilities. The large dike which currently separates the Central and South Ponds will be breached and additional ground shaping and soil movement is necessary (\$5,000)

Contractors will construct and install all accompanying infrastructure associated with the water control structures which includes pipes (\$8,970) and channels (\$13,262) in the wetland that will allow the Preserve managers to control the water flow and divert water from the dechlorination pond to either the Central Pond or the South Pond.

In the past Water has flown from the Central Pond out to the Colorado River via a head gate structure with screw gate which no longer functions. This head gate will be replaced (\$2,300 demolition) with a more efficient Full Round Stoplog Structure (\$5,750). There are also two areas along the west side of the Preserve along the current levee separating the preserve from the Colorado River where existing elevations are lower than required to provide for operational conditions and will require earthwork augmentation to prevent breaching or water loss. Contractors will build up these areas with fill and plug breached areas (\$2,300). Compacted fill and rip rap (\$11,206) is needed to build and reinforce these plugs and at the inlet and outlet of all stoplog structures.

**Shapefile Name:**

**Seed Source:**

**UPCD Reg Team Coord Date:**

**Proposed  
NEPA Action:**

**Proposed  
Arch Action:**

☒ **Vegetation Monitoring**    ☒ **Wildlife Monitoring**

**Monitoring Information:** As part of a large scale research project, the Conservancy and partners will establish long term monitoring transects on site. These transects will be established and monitored in areas where the tamarisk has been mechanically removed. These transects will be set up to document vegetative response to mechanical removal vs mechanical removal & chemical treatment.

**Grazing Management:** n/a

## SPECIES BENEFITING

Waterfowl	Yuma Myotis	Yellow-billed Cuckoo	Lucy's Warbler
Rio Grande Wild Turkey	Southwestern Willow Flycatcher	Neotropical Birds	Mule Deer
Broad-tailed Hummingbird			

## LAND OWNERSHIP

Owner	Acres
DWR	425
Other	450
<b>Total</b>	<b>875</b>

# Project Proposal

## PROPOSED FUNDING

Source	Amount Requested	Date Approved	Amount Approved
Other	\$15,390.00		\$0.00
Other	\$24,210.00		\$0.00
Other	\$10,000.00		\$0.00
DNR Watershed (FY09)	\$13,328.00		\$0.00
Habitat Acct 174	\$36,132.00		\$0.00
DNR Watershed (FY10)	\$36,133.00		\$0.00
<b>Totals</b>	<b>\$135,193.00</b>		<b>\$0.00</b>

## PROPOSED BUDGET

Item	Description	DWR Account	Partner Contrib.
Personal Services	TNC hired engineer to supervise project	\$0.00	\$15,390.00
Personal Services	TNC hire engineer to complete project designs	\$0.00	\$24,210.00
Contractual Services	mobilizatoion	\$4,025.00	\$0.00
Contractual Services	site preperation	\$5,750.00	\$0.00
Contractual Services	demolition of of non-functioning headgate	\$2,300.00	\$0.00
Contractual Services	Main Water Control Structure supplies & constructi	\$9,780.00	\$10,000.00
Contractual Services	3 full round stoplog structures supplies & constru	\$17,250.00	\$0.00
Materials and Supplies	compact fill and rip rap	\$11,206.00	\$0.00
Contractual Services	breach plug- 2 locations	\$2,300.00	\$0.00
Materials and Supplies	HDPE Pipe	\$8,970.00	\$0.00
Contractual Services	channel building	\$13,262.00	\$0.00
Contractual Services	Dechlor pond building and supplies	\$5,750.00	\$0.00
Contractual Services	dike breaching, smoothing, grading	\$5,000.00	\$0.00
<b>Totals</b>		<b>\$85,593.00</b>	<b>\$49,600.00</b>

## PROPOSED FUNDING ALLOCATION

Funding Type	Funding Percent
Nongame Wildlife	50
Waterfowl	50
<b>Total</b>	<b>100.00%</b>

## Project Map:

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